

METHOD AND APPARATUS FOR A MORPHOLOGY- PRESERVING SMOOTHING FILTER

Abstract

5 A method and apparatus for implementing a signal morphology preservation
smoothing scheme. The smoothing scheme includes generating an output signal
representative of a filtered version of the input signal, wherein the output signal is
generated by adaptively removing low amplitude, high frequency noise components
while simultaneously preserving signal morphology of the input signal. The
10 smoothing scheme includes comparison of a distance metric against a distance
threshold to determine whether an initial smoothed version of the input signal would
be oversmoothed or undersmoothed. Then the smoothing scheme appropriately
increments, decrements, or maintains the initial level of smoothing to generate an
optimal smoothed signal representative of the output signal.

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